Claims 30-33 and 35-38 were rejected under 35 U.S.C. §102(b) by Koester (U.S. Patent No. 4,241,257). Claims 30 and 35, as amended, describe that light directed into the medium and returned light collected from the medium substantially share a common objective. In contrast, Koester's objective lens L3 illuminates the specimen using "only about half of the aperture of lens L3", see col. 4, lines 2-4, and light returning from the specimen passes through the other half of the aperture of lens L3, as evident by illustrated light rays through lens L3 in FIGS. 1, 4, 5, 7, and 11. Although the light illuminating and light returning may use the same objective in Koester, such light illuminating and light returning do not substantially share that objective since the illuminating light path and returning light path each utilize one-half of the objective's aperture. In the Koester embodiment of FIG. 9, different lens L3 and L4 direct light and collect light, respectively, and thus a common objective is not present in FIG. 9. Clearly, Koester lacks the objective of Claims 30 and 35. Thus, Koester does not anticipate Claims 30 and 35, and Applicant requests that the rejection of Claims 30 and 35, and of their respective dependent Claims 31-33 and 36-38 be withdrawn.

The remaining Claims 39-42 of the application have been allowed.

This amendment is being filed with a request for continued examination of the application and a petition for a two-month extension of time.

Respectfully submitted,

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Enclosures: Request for Continued Examination; and
Petition for Extension of Time.

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I certify that this document is being deposited on January 21, 2003 with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Commissioner for Patents, Washington, D.C. 20231.

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Kenneth J. LuKacher

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APPENDIX

Marked up version of Amended Specification and Claims.

Please replace the paragraph on page 7, lines 8-19, with the following:

The light is returned and collected by the objective 30 and combined inside of the prism 42, and returned as general elliptically polarized beam. The light directed into sample 12 and the light returned from the sample substantially share the same objective 30 as illustrated in FIG. 2. The polarization state of the light returned from the spots C and D[.] depends upon the optical activity and optical retardance, particularly the difference in the average refractive index across the spots C and D. Accordingly, the amount of light from the image plane, which is focused by the condenser 34 and passes through the confocal aperture as the optical signal which is detected by the detector[,] 24 depends upon the amount of polarization rotation, or the differential interference which produces a phase rotation of the polarization vector. Since the polarizing beamsplitter is set to reflect the polarization orthogonal to the incident polarization 16, towards the detector with greatest efficiency, the intensity of illumination at the detector depends upon the rotation and polarization (in effect the degree of elliptical polarization) which is produced by the material in the sample in the image plane.

30. (twice amended) A system for imaging a section of a medium which receives and returns light from the section and from sites adjacent to the section, said system comprising:

optics for directing light in beams of different polarization in said medium along an imaging plane inside the medium and collecting returned light from the medium, wherein said optics further comprise an objective, and said light directed into the medium and said returned light collected from the medium share substantially said objective;

means for generating an image of the section from said returned light in response to a polarization parameter of said returned light; and

wherein said beams are overlapping in said medium outside the imaged section to reduce the part of said returned light from the sites adjacent said section on opposite sides of said section in the direction of propagation of the beams.

35. (twice amended) A method for imaging a section of a medium which receives and returns light from the section and from sites adjacent to the section, said method comprising the steps of:

directing light in beams of different polarization in said medium along an imaging plane inside the medium;

collecting returned light from the medium, in which said light directed into said medium and said returned light collected from said medium substantially share a common objective;

generating an image of the section from said returned light in response to a polarization parameter of said returned light; and

wherein said beams are overlapping in said medium outside the image section to reduce the part of said returned light from the sites adjacent said section on opposite sides of said section in the direction of propagation of said beams.